

Water Pollution Control Plan

for Project:

Located at:

Address:

WPCP Prepared by:

Company:

Individual:

Address:

Preparation Date:

Prepared for:

City of San Diego

Department:

Address:





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1.0 PROJECT INFORMATION

1.1 INTRODUCTION

The San Diego Regional Water Quality Control Board (RWQCB) adopted Order No. R9-2013-0001, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region* on May 8, 2013 (MS4 Permit). The MS4 Permit requires the City of San Diego (City) to necessitate implementing effective best management practices (BMPs) to reduce discharges of pollutants in storm water from construction sites to the maximum extent practicable and effectively prohibit non-storm water discharges from construction sites into the MS4. These BMPs must be site specific, seasonally appropriate, and construction phase appropriate. BMPs must be implemented at each construction site year-round. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30).

Construction projects that result in disturbance of one acre or more of total land area or are part of a larger common plan of development or sale must obtain coverage under the State Water Resource Control Board's (SWRCB's) *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* Order No. 2009-0009-DWQ NPDES No. CAS000002 (Construction General Permit). The Construction General Permit requires developing and implementing a Storm Water Pollution Prevention Plan (SWPPP).

A Water Pollution Control Plan (WPCP) must be developed and implemented for construction projects that:

- Result in disturbance of less than one acre of total land area and are not part of a larger common plan of development or sale; and
- Have *Grading*, *Public Right-of-Way*, and *Demolition/Removal* approval types (see the City's [Form DS-560](#)) or require submittal for a Drainage and Grades review.

This template may be utilized to meet the City's WPCP requirement.

A Minor Water Pollution Control Plan (MWPCP) (see the City's [Form DS-570](#)) may be developed and implemented for projects that disturb less than 5,000 square feet and have less than a 5 foot elevation differential over the entire project area. Some construction project types, such as interior plumbing, electrical and mechanical work, may be considered exempt. The City's [Form DS-560](#), *Storm Water Requirements Applicability Checklist* can be used to determine the storm water requirements for the project (see Appendix C).

NOTE: It is the responsibility of the project owner to ensure that all construction activities comply with local and state regulations, including San Diego Municipal Code Sect. 43.03. The guidance and template provided here is for the applicant's convenience and do not alleviate responsibility on part of the project owner to determine the appropriate level of BMP planning and implementation to prevent pollutant discharges.

The WPCP developer should complete the text and check boxes. Additional completion information is provided in red font.

1.2 OBJECTIVES

The main objectives of the WPCP are:



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- To identify all pollutant sources which may affect the quality of storm water discharges from the site associated with construction activities;
- To identify non-storm water discharges and eliminate unauthorized non-storm water discharges, illicit connections, and dumping;
- To establish, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site; and
- To develop an inspection program to determine the effectiveness of site BMPs.

1.3 GENERAL PROJECT INFORMATION

This section provides project information relevant to the development of this WPCP.

1.3.1 Project Location

The project location and identifying information are provided in Table 1.

[Complete Table 1.]

Table 1
Project Location and Contact Information

Contact Information			
Applicant Name: For Private use Owner; For CIP use Asset Department Name	Contact Name:		
Mailing Address:	City:	State:	Zip Code:
Telephone No.:	Email address:		
Project Information			
Address:	City:	State:	Zip Code:
APN No.:	Permit Application No. For CIP use WBS#		
Contractor Company Name:		Contact Name:	
Address:	City:	State: CA	Zip Code:
Telephone No.:	Email address:		
Qualified Contact Person (QCP):			
Telephone No.:	Email address:		



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1.3.2 Project Description

The project description is provided in Table 2.

[Complete Table 2.]

**Table 2
Project Description**

Project Scope:	
Land Use Type:	
Watershed:	
Receiving Water Body:	
303(d) Listed Impairments	
Soil Type:	
Slope Inclination:	
Slope Aspect:	
Fill Material and Borrow Area Location(s):	
Storm Water Conveyance:	
Existing and Planned Storm Water Features:	
Sources of Run-on to the Site:	



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Discharge Locations:	
Other Site Features:	

1.3.3 Project Size

The size of the project and disturbed area is described in Table 3, as well as the elevation differential over the project area.

[Complete Table 3.]

**Table 3
Project Size**

Total Project Size (in ac):	Estimated Amount of Disturbed Area (ac):
Estimated Elevation Differential over Entire Project Area (ft):	

1.3.4 Construction Schedule

The construction schedule is provided in Table 4, including an indication of activities to be performed in the rainy season and the phase of construction (Grading and Land Development, Streets and Utilities, Vertical Construction, or Post-Construction). The rainy season is October 1 through April 30 of each year. The schedule shall include dates for installation and removal of construction BMPs. In addition, the schedule shall identify periods of inactivity exceeding 14 days (Slope stabilization is required on all inactive slopes during the rainy season).

[Complete Table 4.]

**Table 4
Construction Schedule**

Construction Activity	Start Date	Finish Date	Rainy Season (Y/N)	Phase of Construction



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1.3.5 Site Priority

Select the site priority identified on the City's [Form DS-560](#) (see Appendix C) in Table 5.

**Table 5
Site Priority**

Site Priority	Check One
ASBS: Projects located in the ASBS watershed.	<input type="checkbox"/>
High: Projects 1 acre or more determined to be Risk Level 2 or Risk Level 3 per the Construction General Permit and not located in the ASBS watershed; Projects 1 acre or more determined to be LUP Type 2 or LIP Type 3 per the Construction General Permit and not located in the ASBS watershed.	<input type="checkbox"/>
Medium: Projects 1 acre or more but not subject to an ASBS or high priority designation.	<input type="checkbox"/>
Low: Projects requiring a WPCP, but not subject to an ASBS, medium, or high priority designation.	<input type="checkbox"/>
If "High", is the project covered under an Erosivity Waiver by the RWQCB?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If "Yes", provide WDID# and include a copy of the NOI in the Appendix.	

1.3.6 Site Features, Construction Activities, and Associated Potential Pollutants

Potential pollutant sources may stem from construction materials used on-site that are not designed to be outdoors and exposed to environmental conditions (i.e., are used in the process of construction, but are not the final product). Construction materials have the potential to come into contact with storm water when stored or used outdoors on the site.

[The questions in Table 6 are designed to assist with selecting appropriate BMPs for the site; please check "Yes" or "No" and provide additional information if needed.]



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Table 6
Determination of Site Features, Activities, and Potential Pollutants

No.	Site Feature Question	No	Yes	If Yes, Select BMPs from Table:
1	Is there run-on to the site from surrounding areas?	<input type="checkbox"/>	<input type="checkbox"/>	14
2	Are storm drain inlets located within the project boundary and/or will the site discharge storm water to nearby storm drain inlets?	<input type="checkbox"/>	<input type="checkbox"/>	12 and 14
3	Will concentrated flows and/or large accumulations of water occur on-site?	<input type="checkbox"/>	<input type="checkbox"/>	14
4	Is the site adjacent to a waterway or sensitive habitat (i.e., wetland, vernal pool, etc.)? Note: additional permitting may be required.	<input type="checkbox"/>	<input type="checkbox"/>	11
5	Is the site likely to discharge to impaired or sensitive water bodies (tributary to a Clean Water Act Section 303[d]-listed/impaired water body segments), adjacent to or discharging directly to coastal lagoons, or other receiving waters in Environmentally Sensitive Areas (as defined in Attachment C of the San Diego Municipal Storm Water Permit, Order No R9-2013-0001)?	<input type="checkbox"/>	<input type="checkbox"/>	See <i>Storm Water Standards</i>
6	Will the site have exposed/disturbed slopes greater than 5 percent?	<input type="checkbox"/>	<input type="checkbox"/>	7, 8, 9, 10, and 12

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Table 6 (Continued)
Determination of Site Features, Activities, and Potential Pollutants

No.	Site Activity Question	No	Yes	If Yes, Select BMPs from Table:	Potential Pollutant Sources (add, if not listed)
7	Will there be soil-disturbance activities (grading, stockpiling, trenching, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	7, 8, 9, 10, 12, and 13	Sediment
8	Will there be asphalt paving, cutting, and/or patching?	<input type="checkbox"/>	<input type="checkbox"/>	17	Asphalt, aggregate
9	Will there be stockpiling (i.e., soil, concrete, solid waste, etc.) for over 24 hours?	<input type="checkbox"/>	<input type="checkbox"/>	7 and 16	Stockpiled material, <u>please specify:</u>
10	Will there be slurries from concrete or mortar mixing, coring, or saw cutting?	<input type="checkbox"/>	<input type="checkbox"/>	15, 16, and 17	Concrete materials, aggregate, slurry water
11	Will wash water or liquid waste be generated from this project?	<input type="checkbox"/>	<input type="checkbox"/>	15, 16, and 19	Liquid waste, <u>please specify:</u>
12	Will there be dewatering operations?	<input type="checkbox"/>	<input type="checkbox"/>	19	Dewatering water, <u>please specify:</u>
13	Will there be on-site storage of construction materials such as mortar mix, raw landscaping and soil stabilization materials, treated lumber, rebar, and plated metal fencing materials?	<input type="checkbox"/>	<input type="checkbox"/>	17	Construction materials, <u>please specify:</u>
14	Will trash or solid wastes (including landscaping wastes) be generated from this project?	<input type="checkbox"/>	<input type="checkbox"/>	16	Solid waste, <u>please specify:</u>
15	Will hazardous materials or wastes, including paint, be stored or handled on-site?	<input type="checkbox"/>	<input type="checkbox"/>	16	Hazardous material, <u>please specify:</u>
16	Will construction equipment and/or vehicles be stored, fueled, maintained, or washed on-site?	<input type="checkbox"/>	<input type="checkbox"/>	15, 18, and 19	Engine fluids, fuels, oil, grease, wash water
17	Will portable sanitary facilities ("Porta-potties") be used on the site?	<input type="checkbox"/>	<input type="checkbox"/>	15 and 16	Sanitary waste
18	Are underlying soils potentially contaminated?	<input type="checkbox"/>	<input type="checkbox"/>	16	Contaminated soil



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Table 6 (Continued)
Determination of Site Features, Activities, and Potential Pollutants

No.	Site Activity Question	No	Yes	If Yes, Select BMPs from Table:	Potential Pollutant Sources (add, if not listed)
19	Will dust (i.e., from grading, driving on unpaved roads, etc.) or particulates (i.e., from sandblasting, concrete cutting, painting, etc.) be generated from this project?	<input type="checkbox"/>	<input type="checkbox"/>	20	Sediment, particulate construction materials, <u>please specify:</u>
20	Other activities will be performed that are not described above?	<input type="checkbox"/>	<input type="checkbox"/>	Select applicable BMPs from Tables 7-20	<u>Please specify:</u>
21	Final stabilization of the site is required.		<input type="checkbox"/>	21	Not applicable

1.4 RESPONSIBILITY FOR WPCP DEVELOPMENT AND IMPLEMENTATION

This WPCP shall be completed and certified by a Qualified Contact Person (QCP). A QCP will also be responsible for amending this WPCP. The QCP is responsible for WPCP implementation and self-inspections (see Section 3.0).

1.5 AVAILABILITY

This WPCP shall remain on-site at all times during business hours and readily available for review by the U.S. Environmental Protection Agency (EPA), SWRCB, San Diego RWQCB, City of San Diego representatives, and all operating personnel for the duration of the project. Authorized representatives from the U.S. EPA, SWRCB, San Diego RWQCB, and the City of San Diego shall be permitted entry to the site for reviewing this WPCP, inspecting the site, and/or collecting storm water samples.

1.6 AMENDMENTS

This WPCP shall be amended whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater, or to the City's MS4 or are deemed necessary by the Resident Engineer or Building Inspector.

1.7 NON-STORM WATER DISCHARGES

Discharging any material other than storm water to Waters of the State or to the City's MS4 is prohibited. However, certain exceptions apply.

According to the SWRCB ASBS Resolution No. 2012-0031, existing storm water discharges into an ASBS are allowed only under the following conditions:

1. The discharges are authorized by an NPDES permit issued by the SWRCB or Regional Water Board;
2. The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and
3. The discharges:



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- a. Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
- b. Are designed to prevent soil erosion;
- c. Occur only during wet weather; and
- d. Are composed of only storm water runoff.

Furthermore, the following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

1. Discharges associated with emergency firefighting operations.
2. Foundation and footing drains.
3. Water from crawl space or basement pumps.
4. Hillside dewatering.
5. Naturally occurring groundwater seepage via a storm drain.
6. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

See the City's Storm Water Standards – Construction BMP Standards to determine applicable non-storm water regulations.

1.8 SITE MAP DEVELOPMENT

A Site Map must be developed and included as Appendix A of this WPCP. The site map should be neat and legible. Several sheets may be used to illustrate the phasing of BMP implementation as construction progresses over time. When two or more sheets are used to illustrate the plan view, an index sheet is required. The Site Map must include all of the following, where applicable:

- Legend, north arrow, and scale of the drawing
- The site boundary and limits of construction;
- Key site features such as steep slopes, highly erodible soils, etc., including State and federal wetlands, if any;
- Storm water conveyance features including, but not limited to all streams and drainage ways delineated, all storm drain inlets and outlets, curb and gutter, swales and channels.
- Anticipated discharge points for construction wastewater (i.e. stormwater, groundwater, and construction wastewater such as dewatering byproducts);
- Drainage areas and direction of flow
- Location of nearby water bodies (including Clean Water Act Section 303(d) List of Impaired Segments in the site's vicinity)
- Location of entrance/exits to the project area
- Areas of soil disturbance and potential pollutant sources;
- Material, stockpile, and waste storage areas(e.g., trash, soil, fuel, construction materials);
- Vehicle and equipment fueling, wash and maintenance areas;



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- Locations of portable sanitary facilities;
- Locations where underlying soil is potentially contaminated; and
- Locations of all BMP implementation areas (types of erosion and sediment controls, as well as dewatering and soil stabilization controls, where applicable).
- Location of building and activity areas (e.g., fueling islands, garages, waste container area, wash racks, hazardous material storage areas)

[Develop a Site Map that includes all the features listed above and include as Appendix A. Update as necessary.]



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2.0 BEST MANAGEMENT PRACTICES

The BMPs listed in this WPCP will be implemented on a year-round basis throughout the project duration, not solely during seasons in which the probability of a rain event is high. All areas not in use for 14 days will be stabilized (i.e., exposed soil will be covered). Sufficient BMP materials will be maintained on-site to allow implementation with this WPCP and emergency installation in the event of a breach. Locations where BMPs will be implemented are to be shown on the Site Map in Appendix A.

BMPs must be implemented on construction sites to reduce pollution to the maximum extent practicable. The City's *Storm Water Standards*, which is available online at <http://www.sandiego.gov/stormwater/regulations/index.shtml> outlines the requirements for construction storm water BMPs. The following BMP categories must be addressed:

- Erosion control;
- Sediment control;
- Run-on and site storm water management;
- Materials management;
- Non-storm water management;
- Particulate and dust control; and
- Final stabilization.

BMPs from each of the above categories must be used together as a system in order to prevent potential pollutant discharges. Each category is generally described and applicable BMPs are listed in the following sections. Projects containing site features identified with a "yes" answer in Table 6 must utilize BMPs from the applicable BMP table(s). If no BMPs from a specific table are selected, an explanation must be provided. For BMP implementation details, refer to:

- California Stormwater Quality Association (CASQA) *Construction BMP Handbook Portal*, 2010, online at: <http://www.casqa.org/LeftNavigation/ConstructionBMPHandbookPortalSWPPPTemplate/t/abid/200/Default.aspx>, (subscription required); and
- California Department of Transportation (Caltrans) *Construction Site BMP Handbook*, 2003, online at: http://www.dot.ca.gov/hq/construc/stormwater/CSBMPPM_303_Final.pdf.

2.1 EROSION CONTROL

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles and many have the secondary effect of increasing water infiltration. Erosion controls are provided in Table 7–9.

Erosion controls must be used in conjunction with sediment controls. Apply erosion controls as soon as grading and/or excavation are completed for any portion of the site, but no longer than 14 days after activity has ceased. Prior to and during rain events, slopes must be stabilized and erosion control BMPs must be maintained. Loose construction and landscaping materials, including stockpiles, must be



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covered and bermed at the end of each work day. Plastic sheeting for erosion control should be avoided for long term use, except to cover stockpiles prior to rain events. Exposed areas shall be inspected frequently and if signs of erosion are observed, additional erosion control BMPs shall be implemented.

Scheduling/phasing construction is required on all sites to minimize soil exposure and soil disturbance during the rainy season. When planning grading activities, minimize slope length and gradient to the greatest extent possible to avoid erosion and to promote vegetation establishment. Ensure slopes are set back from the property boundary whenever possible. Inactive stockpiles should be covered and bermed (with jute netting and fiber rolls or similar).

[Select from the general erosion control BMPs from Table 7].

Table 7
General Erosion Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Scheduling/Phasing Construction	EC-1	SS-1	<input type="checkbox"/>
Minimize Slope Length and Gradient	-	-	<input type="checkbox"/>
Manage Soil Stockpiles	WM-3	WM-3	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional erosion control BMPs to be implemented:			
Describe where erosion and sediment control BMPs will be implemented/installed:			

2.1.1 Physical Stabilization

Physical stabilization consists of materials other than vegetation used to temporarily or permanently stabilize exposed areas. Materials used for physical stabilization should be determined based on site conditions. For example, geotextiles are generally installed where runoff is concentrated and are left in place long term. Jute erosion control blankets, hydraulic mulch, and soil binders are usually installed as temporary BMPs. Permanent physical stabilization may be necessary where vegetation cannot establish, such as on steep slopes, where topsoil has been removed, or where there is lack of water. Projects likely to discharge to Environmentally Sensitive Areas shall use high performance erosion control methods, such as bonded fiber matrix or anchored erosion control blankets on all exposed slopes.

Erosion control blankets, which can consist of jute, straw, coconut, and/or wood fiber, are common BMPs for stabilizing slopes. The type of blanket used usually depends on the longevity needed (see BMP references for details). Blankets need to be staked into the soil as specified by the manufacturer, keyed in on the top of the slope, and must have good soil contact to be effective (i.e., generally not suitable for rocky sites). Turf reinforced mats are installed in swales and ditches and are used in conjunction with vegetation (the roots lock the mat into the soil and further reduce erosion from high velocity flows).

Hydraulic mulch usually consists of wood fiber mulch, water, and sometimes soil binder. Bonded fiber matrix is similar, but the mulch material is long strand wood fibers that lock together with a bonding agent



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and is also applied hydraulically. Soil binders can consist of natural materials, such as guar, or man-made polymers (although some may not function well on sandy soils). The longevity varies with different products; see the BMP references for details.

Straw is generally the material used for mulch; it should be punched into soil or covered with soil binder so that it does not blow or wash away. Chipped brush and trees may also be used as mulch and usually doesn't require application of soil binder. Vegetation grubbed from the site, chipped, and reapplied to exposed soils may also provide a seed bank for vegetation establishment. Mulch used in conjunction with seeding may also enhance vegetation establishment.

A compost blanket (a layer of compost on the soil surface) can be a very effective BMP and can be used on rocky slopes. An added benefit of compost is that it can enhance vegetation establishment while protecting against erosion. The thickness of the compost layer needed is dependent upon the slope gradient (see BMP resources for details). Soil binder in conjunction with compost blanket is usually not necessary. Compost can be applied by hand, with a compost blower, or hydraulically (certain proprietary brands are designed to be applied with hydroseeding equipment).

Roughening a slope reduces the slope's erodibility. Although when used alone, soil roughening does not meet final stabilization requirements and, therefore, is generally used to prepare soil for seeding application, as it provides micro-sites for seed germination. This is performed by mechanical methods such as track-walking, sheep's foot rolling, scarifying, etc.

Reapplying topsoil consists of removing and stockpiling topsoil in areas to be graded or cut. Reapplying the topsoil after grading is completed can provide seed, organic matter, symbiotic fungi, and other elements beneficial to vegetation establishment. The topsoil stockpile must be covered if it will be inactive for over 14 days; however, plastic materials should not be used, as they can sterilize the soil. Jute or straw erosion control blankets are recommended.

Permanent stabilization may consist of retaining walls, rock gabions (wire mesh blocks filled with rock that can be stacked), rock, etc. These features are used on or to support steep slopes or where water velocities/wave action is high (i.e., sea walls, etc.)

[Select physical stabilization BMPs from Table 8.]

Table 8
Physical Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Erosion Control Blankets and Turf Reinforced Mats	EC-7	SS-7	<input type="checkbox"/>
Hydraulic Mulch and Bonded Fiber Matrix	EC-3, EC-5	SS-3	<input type="checkbox"/>
Soil Binders	EC-5	SS-5	<input type="checkbox"/>
Mulch	EC-6, EC-8, EC-14	SS-6, SS-8	<input type="checkbox"/>
Compost Blankets	EC-14	-	<input type="checkbox"/>
Soil Roughening	EC-15	-	<input type="checkbox"/>



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Table 8 (Continued)
Physical Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Topsoil Reapplication	-	-	<input type="checkbox"/>
Permanent Stabilization (i.e., retaining walls, rock gabions, rock riprap, etc.)	-	-	<input type="checkbox"/>
Other Material (to be approved by the City)	EC-16	-	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional physical stabilization BMPs to be installed:			
Describe where physical stabilization BMPs will be installed:			

2.1.2 Vegetation Stabilization

Vegetation must be installed, irrigated, and established (to uniform vegetative coverage with 70 percent coverage) prior to October 1. In the event that stabilizing vegetation has not been established by October 1, other forms of physical stabilization (see previous section) must be employed to prevent erosion until the vegetation is established.

Preserving existing vegetation to the maximum extent possible reduces the need for vegetation re-establishment and is recommended. Areas where vegetation is to be protected need to be clearly marked on the site to avoid accidental removal. Where preservation is not feasible, interim and permanent vegetation/landscaping can be established by seeding; hydroseeding; and installing plugs, sod, or container stock. Begin re-establishing permanent vegetation as early in the project as feasible. The soil should be prepared prior to seeding and the use of compost blankets or straw mulch in conjunction with seeding is recommended. Streambank stabilization is often accomplished with willow staking and live brush mats (see BMP references for details).

[Select from the vegetation stabilization BMPs from Table 9.]

Table 9
Vegetation Stabilization BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Preserve Existing Vegetation	EC-2	SS-2	<input type="checkbox"/>
Establish Interim Vegetation	EC-4	SS-4	<input type="checkbox"/>
Establish Permanent Landscaping	-	-	<input type="checkbox"/>



**Table 9 (Continued)
Vegetation Stabilization BMPs**

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Streambank Stabilization	EC-12	SS-12	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional vegetation stabilization BMPs to be implemented:			
Describe where vegetation stabilization BMPs will be installed:			

2.2 SEDIMENT CONTROL

The goal of sediment control is to capture soil particles which have become detached from disturbed areas by water or wind. Sediment controls, consisting of perimeter control, resource protection, sediment capture, and off-site sediment tracking control (as described below) are required year-round and must be installed and maintained to comply with performance standards of the *Storm Water Standards* (City of San Diego 2012), Section 5.1. Sediment control BMPs are provided in Tables 10–13. They should be used in conjunction with erosion controls.

2.2.1 Perimeter Control

Perimeter control BMPs must be installed and maintained year round and upgraded during the rainy season to comply with performance standards from the *Storm Water Standards* (City of San Diego 2012), Section 5.1. They may consist of silt fencing, gravel bag barriers, fiber rolls (straw wattles), or compost socks/berms. All of the BMPs listed, except gravel bag barriers and compost socks, must be trenched in and backfilled to be effective. Gravel bags and fiber rolls should be stacked if necessary so that storm water cannot flow over the top. Sand bags are not recommended; if the bag is compromised, the sand can be a pollutant source. Certain types of compost socks may also be effective at filtering pollutants other than sediment, including metals and oil/grease.

[Select perimeter control BMPs from Table 10.]

**Table 10
Perimeter Control BMPs**

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Silt Fencing	SE-1	SC-10	<input type="checkbox"/>
Gravel Bag Barriers	SE-6	SC-6	<input type="checkbox"/>
Fiber Rolls or Straw Wattles	SE-5	SC-5	<input type="checkbox"/>



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Table 10 (Continued)
Perimeter Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Compost Socks and Berms	SE-13	-	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional perimeter control BMPs to be implemented:			
Describe where perimeter control BMPs will be installed:			

2.2.2 Resource Protection

Year-round protection of waterways and sensitive areas is required. Linear protection may be installed using silt fencing, gravel bag barriers, fiber rolls, and/or compost socks/berms. Linear protection should be installed between the construction area and the sensitive area. However, it should not be installed up and down a slope, which can cause erosion.

The *Storm Water Standards*, Section 5.1.2 requires preserving natural hydraulic features and riparian area buffers where possible. Additionally, BMPs must be implemented for performing demolition adjacent to a water body (such as installing turbidity curtains) and crossing waterways, dry conveyances, or areas where storm water flows.

[Select at least one BMP from Table 11 if resources, such as water bodies and sensitive areas, are located within or adjacent to the site.]

Table 11
Resource Protection BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Linear Protection	SE-1, SE-6, SE-5, SE-13	SC-10, SC-6, SC-5	<input type="checkbox"/>
Preserve Natural Hydraulic Features and Riparian Area Buffers	-	-	<input type="checkbox"/>
Demolition Adjacent to Water	NS-15	NS-15	<input type="checkbox"/>



**Table 11 (Continued)
Resource Protection BMPs**

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Temporary Stream Crossing	NS-4	-	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional resource protection BMPs to be implemented:			
Describe where resource protection BMPs will be installed:			

2.2.3 Sediment Capture

Sediment in storm water is generally captured by gravity-based (i.e., sediment traps and basins) and passive filtration systems (i.e., silt fence, fiber rolls, etc.). Active treatment systems, which use chemical to flocculate sediments from the water, can be used; however, an additional plan and operator certifications are needed.

Storm drain inlet filters are considered “last resort” BMPs, which are designed to capture only small amounts of sediment. Controlling sediment should begin upstream of the storm drain inlet, via erosion and sediment controls installed at the source. Good housekeeping (i.e., street sweeping and maintaining stabilized entrances/exits) should be performed throughout the life of the project. Check dams may also be installed in the gutter upstream of the drain to slow the velocity of runoff and pre-filter before reaching the drain. Block and gravel filters, which will likely allow higher velocities of runoff to flow through than gravel bags, and compost socks, which allow for moderate runoff flow-through and also may filter metals and oil/grease are recommended.

Sediment basins must be designed in accordance with an industry standard, such as Caltrans's *Construction Site Best Management Practices Manual* (2003). If the project is 1 acre or greater, basins must be designed according to CASQA's *Construction BMP Guidance Handbook*, as per the Construction General Permit. See also, County of San Diego's *Standard Lot Perimeter Protection Design System*, PDS# 659, which allows runoff retention of storm water on flat (less than 3 percent slope) sites, less than an acre in size with applicable perimeter controls, outlet protection, maximum detention time, and inspection/maintenance. If utilizing an active treatment system on-site, refer to Construction General Permit, Attachment F and *Storm Water Standards* (City of San Diego 2012), Section 5.4.2.

[Select from the sediment capture BMPs from Table 12.]



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Table 12
Sediment Capture BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Storm Drain Inlet Protection	SE-10	SC-10	<input type="checkbox"/>
Sediment Trap	SE-3	SC-3	<input type="checkbox"/>
Sedimentation Basin	SE-2	SC-2	<input type="checkbox"/>
Active Treatment System	SE-11	-	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional sediment capture BMPs to be implemented:			
Describe where sediment capture BMPs will be implemented/installed:			

2.2.4 Off-Site Sediment Tracking

Off-site sediment tracking BMPs must be installed and maintained year-round at entrances/exits to comply with performance standards from the *Storm Water Standards* (City of San Diego 2012), Section 5.1. The construction site entrance/exit needs to be stabilized to ensure tracking does not occur. If minimal amounts of sediment tracking are anticipated, shaker plates or similar may be used. However, if larger amounts of sediment tracking or clayey soils are expected, the entrance/exits should be stabilized with 3-6-inch rock overlaying filter fabric, 50 feet by 30 feet minimum, with the length corresponding to the anticipated level of tracking. A tire wash may be installed, if necessary, but must be frequently inspected and maintained to ensure non-storm water discharges to not occur. The entrance/exit should be designed so that vehicles and equipment cannot be driven around the stabilization measures. Construction roads should be stabilized with road base or soil binder to prevent wind and water erosion.

Roads adjacent to the site should be swept or vacuumed when sediment or construction debris has been deposited. Adjacent roads should be inspected daily to ensure tracking is not occurring.

[Select from the off-site sediment tracking BMPs from Table 13.]

Table 13
Off-Site Sediment Tracking BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Construction Entrance/Exit Stabilization	TC-1	TC-1	<input type="checkbox"/>
Construction Road Stabilization	TC-2	-	<input type="checkbox"/>
Tire Wash	TC-3	TC-3	<input type="checkbox"/>

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**Table 13 (Continued)
Off-Site Sediment Tracking BMPs**

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Street Sweeping and Vacuuming	SE-7	SC-7	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional off-site sediment tracking BMPs to be implemented:			
Describe where off-site sediment tracking BMPs will be implemented/installed:			

2.3 RUN-ON AND SITE STORM WATER MANAGEMENT CONTROLS

All run-on, runoff within the site, and runoff that discharges off-site, must be managed to prevent erosive flows. Run-on and site storm water management BMPs are provided in Table 14. Runoff from the site must be directed away from all disturbed areas. If runoff or dewatering operation discharges are concentrated, velocity must be controlled using an energy dissipater. Discharge points and discharge flows must be free of pollutants, including sediment.

Run-on to the site should be diverted around the site if possible. Check dams are used to reduce velocity of concentrated flows, limit erosion in channels, and trap sediment. They can be installed in gutter to reduce sediment loading to storm drain inlets. Slope drains and drainage swales should be used to convey runoff downslope without causing erosion. Slope drains and sediment trap/basin outlets require outlet protection to prevent erosion in this area.

[Select run-on and site storm water management BMPs from Table 14.]

**Table 14
Run-On and Site Storm Water Management BMPs**

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Divert Run-on from Surrounding Areas	EC-9, SE-5, SE-6, SE-13	SC-5, SS-9, SC-6, NS-5	<input type="checkbox"/>
Check Dams	SE-4	SC-4	<input type="checkbox"/>
Slope Drains and/or Stabilized Drainage Swales	EC-9, EC-11	SS-9, SS-11	<input type="checkbox"/>
Outlet Protection	EC-10	SS-10	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional run-on and site storm water management BMPs to be implemented:			
Describe where run-on and site storm water management BMPs will be implemented/installed:			



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2.4 MATERIALS AND WASTE MANAGEMENT CONTROLS

BMPs must be installed to control all construction and waste materials. Additionally, construction-related materials, spills, and residues must be prevented from entering the MS4. Materials and waste management BMPs are provided in Table 15–18. Keep an inventory of construction materials that will be used outdoors and exposed to precipitation, other than those designed for this purpose (i.e., poles, bricks, etc.). Designate materials loading, unloading, and storage areas. Do not perform activities during a rain event that may contribute to storm water pollution (i.e., loading/ unloading, etc.) and minimize exposure of construction materials to precipitation.

2.4.1 Spill Control

Post procedures for storage, clean-up, and spill-reporting for hazardous materials and wastes in open, conspicuous, and accessible locations adjacent to storage areas. Ensure all on-site staff receives spill prevention, control, and reporting training. Ample spill controls materials should be stored on-site. Significant spills must be reported to the City Enforcement Agency within 24 hours.

[Select spill control BMPs from Table 15.]

Table 15
Spill Control BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Spill Prevention and Control	WM-4	WM-4	<input type="checkbox"/>
Reporting Significant Spills	-	-	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional spill control BMPs to be implemented:			
Describe where spill control BMPs will be implemented/installed:			

2.4.2 Waste Management

Wastes must be fully managed to prevent discharges to the MS4. Properly designate and protect waste storage areas. Waste disposal containers must be free of leaks and covered at the end of every business day and during rain events.

Liquid waste management includes, but is not limited to, wash water, or accumulated storm water that has come into contact with pollutants. In some cases, a system to collect liquid wastes from the ground (via vacuuming or collecting in a temporary capture device) may be necessary.

Install secondary containment for, and stake down, portable restrooms to prevent leaks and blow-over. Portable restrooms must be located away from storm water conveyance features and vehicle/equipment traffic. Stockpiled waste materials must be secure and protected from wind and rain at all times unless actively being used. Waste stockpiles must be covered and bermed unless actively being used. Remove waste stockpiles from the site as soon as possible.

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[Select waste management BMPs from Table 16].

**Table 16
Waste Management BMPs**

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Solid Waste Management	WM-5	WM-5	<input type="checkbox"/>
Liquid Waste Management	WM-10	WM-10	<input type="checkbox"/>
Contaminated Soil Management	WM-7	WM-7	<input type="checkbox"/>
Sanitary Waste Management	WM-9	WM-9	<input type="checkbox"/>
Concrete Waste Management	WM-8	WM-8	<input type="checkbox"/>
Hazardous Waste Management	WM-6	WM-6	<input type="checkbox"/>
Stockpiled Waste Management	WM-3	WM-3	<input type="checkbox"/>
<i>If no BMPs were selected, explain the rationale:</i>			
<i>Describe any additional waste management BMPs to be implemented:</i>			
<i>Describe where waste management BMPs will be implemented installed:</i>			

2.4.3 Material Storage and Handling

Manage and store construction materials, chemicals (including paints, solvents, glue/epoxy, primers thinners, liquid asphalts and emulsions, and hazardous materials) so that they will not spill or leak and will not pollute storm water. Cover or store materials indoors and provide secondary containment for materials not designed to come into contact with storm water. Paving and concrete materials should be properly contained and covered if necessary. Slurries from cutting activities should be vacuumed and disposed of off-site. Storm drain inlets downstream of paving and concrete activities should be covered while handling or using materials that could discharge to the storm drain system.

[Select material storage and handling BMPs from Table 17.]

**Table 17
Material Storage and Handling BMPs**

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Material Storage	WM-1	WM-1	<input type="checkbox"/>
Material Handling	WM-2	WM-1	<input type="checkbox"/>



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Table 17 (Continued)
Material Storage and Handling BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Paving and Grinding Operations	NS-3	NS-3	<input type="checkbox"/>
Concrete Management	NS-12, NS-13, NS-16	NS-12, NS-14	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional material storage and handling BMPs to be implemented:			
Describe where material storage and handling BMPs will be implemented/installed:			

2.4.4 Vehicle and Equipment Management

Vehicle and equipment management BMPs are needed if these will be used, fueled, maintained, and/or parked onsite. Storage, service, cleaning, and maintenance areas for vehicles and equipment shall be identified with signage and fully contained. Spill materials should always be available during fueling and fueling operations should not be left unattended. If fueling or maintaining equipment in the field is performed, drip pans should be used to capture spills. Also utilize drip pans under leaking equipment or vehicles, inspect the pans regularly to prevent overflow, and remove leaking vehicles/ equipment from the site as soon as feasible.

[Select vehicle and equipment management BMPs from Table 18.]

Table 18
Vehicle and Equipment Management BMPs

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Vehicle and Equipment Fueling	NS-9	NS-9	<input type="checkbox"/>
Vehicle and Equipment Maintenance	NS-10	NS-10	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional vehicle and equipment management BMPs to be implemented:			
Describe where vehicle and equipment management BMPs will be implemented/installed:			



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2.5 NON-STORM WATER MANAGEMENT CONTROLS

Non-storm water discharges are defined as any discharges to the storm water conveyance system that is not entirely composed of storm water. Non-storm water management BMPs are provided in Table 19. Non-storm water discharges must be eliminated or controlled to the maximum extent practicable. See Section 1.7 for a list of allowable discharges to the City's MS4. All non-storm water discharges shall be controlled by implementing water conservation practices, implementing good housekeeping techniques, and implementing a program to detect and eliminate illicit discharges.

The site should be inspected frequently for illicit connections and discharges. If observed, action should be taken as soon as possible to halt the connection/discharge. Illicit discharges to the City's MS4 should be reported to the City Enforcement Agency within 24 hours. Overspray and overwatering of vegetation for erosion control and landscaping should be avoided. Water line breaks should be repaired as soon as possible. Vehicle and equipment cleaning should be performed off-site if possible or otherwise in a location where wash water will drain to the sanitary sewer.

Dewatering uncontaminated (i.e., free of sediment or any other pollutant) groundwater is allowable, but may require additional permitting depending on the discharge location (i.e., see the San Diego RWQCB's Order No. R9-2007-0034, Order No. R9-2008-0002 and General Conditional Waiver No. 2). If discharging groundwater to the sanitary sewer, a Request for Authorization must be submitted to the City Public Utilities Department. Dewatering of accumulated, uncontaminated storm water is allowable if the discharges are monitored/visually observed.

[Select non-storm water management BMPs from Table 19.]

**Table 19
Non-Storm Water Management BMPs**

Best Management Practices	References		Check at least one BMP
	CASQA BMP	Caltrans BMP	
Illicit Connection/Discharge Control	NS-6	NS-6	<input type="checkbox"/>
Potable Water/Irrigation	NS-7	NS-7	<input type="checkbox"/>
Vehicle and Equipment/Cleaning	NS-8	NS-8	<input type="checkbox"/>
Water Conservation Practice	NS-1	NS-1	<input type="checkbox"/>
Dewatering Operations	NS-2	NS-2	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional non-storm water management BMPs to be implemented:			
Describe where non-storm water management BMPs will be implemented/installed:			

2.6 PARTICULATE AND DUST CONTROL

Wind erosion control BMPs are implemented to prevent the air deposition of site materials and site operations. Particulate and dust control BMPs are provided in Table 20. Such particulates can include sediment, nutrients, trash, metals, bacteria, oil/grease, and organics. Ensure a water truck is available



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while construction activities are being performed, especially when soil and stockpiled material is being handled. Spray exposed soils with water or soil binder via water truck. Ensure construction materials are not discharged through the air. Do not perform activities that may discharge particulates on windy days.

[Select particulate and dust control BMPs from Table 20.]

Table 20
Particulate and Dust Control BMPs

Best Management Practices	References		Check BMP, if applicable
	CASQA BMP	Caltrans BMP	
Wind Erosion Control	WE-1	WE-1	<input type="checkbox"/>
If no BMPs were selected, explain the rationale:			
Describe any additional particulate and dust control BMPs to be implemented:			
Describe where particulate and dust control BMPs will be implemented:			

2.7 FINAL STABILIZATION

For a construction project to be considered complete, all of the following conditions must be met:

- The site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity.
- There is no potential for construction-related storm water pollutants to be discharged into site runoff.
- Final stabilization has been reached by one of the following:
 - Attaining 70 percent uniform vegetative cover or equivalent stabilization measures¹, such as: erosion control blankets, reinforced channel liners, and geotextiles;
 - Calculating annual average soil loss with the Revised Universal Soil Loss Equation (RUSLE) or RUSLE2 for pre- and post-construction to demonstrate that the site will not yield more sediment than prior to construction; or
 - Otherwise demonstrating that final stabilization has been achieved.
- Construction materials, temporary BMPs, and wastes have been removed from the site.

¹ Where background native vegetation covers less than 100 percent of the surface, the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground surface, 70 percent of 50 percent (0.70 X 0.50 = 0.35) would require 35 percent total uniform surface coverage.



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- Post-construction BMPs, if required, have been effectively implemented.

Final stabilization BMPs are provided in Table 21.

[Select the final stabilization BMP in Table 21.]

**Table 21
Final Stabilization BMP**

Best Management Practices	References		Check BMP
	CASQA BMP	Caltrans BMP	
Final Stabilization	-	-	<input type="checkbox"/>
Describe final stabilization BMPs:			
Describe where final stabilization BMPs will be installed:			



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3.0 BEST MANAGEMENT PRACTICE MAINTENANCE AND INSPECTION

Construction is a dynamic operation where changes are expected. Construction site activities can damage BMPs. Storm water BMPs for construction sites are typically temporary measures that require frequent maintenance to maintain effectiveness. BMPs facilities may require relocation, revision and re-installation, particularly as project grading progresses.

3.1 BMP MAINTENANCE

Best management practice maintenance requirements are listed in Table 22. The following subsections describe the inspection program responsibilities and requirements.

Table 22
BMP Maintenance Requirements

Best Management Practices	Maintenance Requirements
Scheduling/Phasing Construction	Periodically review construction schedule to determine if activity during the rainy season can be minimized.
Minimize Slope Length and Gradient	Not applicable.
Manage Soil Stockpiles	Replace compromised covers and berms. Ensure stockpiled material is within the bermed area. Store ample supplies of cover material and fiber rolls on site.
Erosion Control Blankets and Turf Reinforced Mats	Replace compromised blankets and mats. Ensure good soil contact.
Hydraulic Mulch and Bonded Fiber Matrix	Reapply if signs of erosion are observed.
Soil Binders	Reapply if signs of erosion are observed.
Mulch	Reapply where soil is exposed.
Compost Blankets	Reapply where soil is exposed.
Soil Roughening	Not applicable.
Topsoil Reapplication	Not applicable.
Permanent Stabilization (i.e., retaining walls, rock gabions, rock riprap, etc.)	Remove accumulated sediment and debris.
Other Material (to be approved by the City)	Remove accumulated sediment and debris.
Preserve Existing Vegetation	Ensure protected vegetation is clearly marked.
Establish Interim Vegetation	Reapply seed or replant stock if vegetation does not establish.
Establish Permanent Landscaping	Reapply seed or replant stock if vegetation does not establish.
Streambank Stabilization	Reinstall if stabilization does not establish.

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**Table 22 (Continued)
BMP Maintenance Requirements**

Best Management Practices	Maintenance Requirements
Silt Fencing	Replace compromised silt fence. Ensure fence is trenched and backfilled. Remove sediment accumulated to 1/3 the fence height.
Gravel Bag Barriers	Replace every 2-3 months as bags degrade. Remove sediment accumulated to 1/3 the bag height.
Fiber Rolls or Straw Wattles	Replace compromised rolls. Ensure rolls are trenched in and backfilled. Remove sediment accumulated to 1/3 the roll height.
Compost Socks and Berms	Replace compromised socks. Remove sediment accumulated to 1/3 the sock height.
Linear Protection	See applicable BMPs.
Preserve Natural Hydraulic Features and Riparian Area Buffers	Not applicable.
Demolition Adjacent to Water	Empty debris-catching devices daily. Ensure collected debris is stored away from the watercourse.
Temporary Stream Crossing	Repair if signs of erosion are observed. Replace displaced aggregate from culvert inlets and outlets.
Storm Drain Inlet Protection	Repair compromised protection. Remove accumulated sediment and debris.
Sediment Trap	Corrective measures should be taken if the BMP does not dewater completely in 96 hours or less to prevent vector production. Repair if trap is compromised or signs of erosion are noted at the outlet. Remove accumulated sediment when it reaches 1/3 capacity.
Sedimentation Basin	Corrective measures should be taken if the BMP does not dewater completely in 96 hours or less to prevent vector production. Repair if trap is compromised or signs of erosion are noted at the outlet. Remove accumulated sediment when it reaches 1/3 capacity.
Active Treatment System	See manufacturer's recommendations and CASQA guidance.
Construction Entrance/Exit Stabilization	Install prior to construction start; replace gravel when surface voids are visible; remove post-construction.
Construction Road Stabilization	Install prior to construction start; replace gravel when surface voids are visible; remove post-construction.
Tire Wash	Remove accumulated sediment to maintain system performance. Ensure non-storm water discharges are not occurring.
Street Sweeping and Vacuuming	Implement as soon as possible upon sediment deposition.



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Table 22 (Continued)
BMP Maintenance Requirements

Best Management Practices	Maintenance Requirements
Divert Run-on from Surrounding Areas	Ensure that diversions are effective.
Check Dams	Remove accumulated sediment and debris when it reaches 1/3 the height of the dam.
Slope Drains and/or Stabilized Drainage Swales	Replace/repair if visible signs of erosion are observed.
Outlet Protection	Remove accumulated sediment and debris when observed in protection devices.
Spill Prevention and Control	Ensure that ample supplies of spill cleanup materials are stored onsite and within vehicles and equipment.
Reporting Significant Spills	Ensure that on-site staff receives spill cleanup and reporting training.
Solid Waste Management	Arrange for waste collection as necessary; remove deposited solids in containment areas and collection devices; inspect and repair containment areas and capturing devices.
Liquid Waste Management	Arrange for waste collection as necessary; remove liquid wastes containment areas and collection devices; inspect and repair containment areas and capturing devices.
Contaminated Soil Management	Ensure that contaminated soil stored on-site is covered and bermed at all times and does not have the potential to contact storm water or groundwater.
Sanitary Waste Management	Coordinate with a local contractor for frequent inspection and maintenance.
Concrete Waste Management	Repair concrete washout when compromised. Ensure adequate freeboard prior to rain events. Remove accumulated waste when 1/3 capacity.
Hazardous Waste Management	Keep storage areas clean and organized; store ample cleanup supplies on site; control storage area perimeter; repair containment structures, covers, and liners as necessary.
Stockpiled Waste Management	Ensure that stockpiled waste is covered and bermed at all times, unless actively using.
Material Storage and Handling	Store ample supplies of spill cleanup materials onsite; clean and organize storage areas; repair perimeter controls, containment structures, covers, and liners; spot check materials use throughout the construction period to ensure proper practices are utilized.
Paving and Grinding Operations	Arrange for regular collection of paving wastes. Inspect storm drains near paving to ensure their cover.



**Table 22 (Continued)
BMP Maintenance Requirements**

Best Management Practices	Maintenance Requirements
Concrete Management	Remove and dispose of hardened concrete as needed. Concrete waste facilities must be cleaned, or new facilities must be constructed and ready for use once facilities are 75% full. Inspect concrete waste facilities for damage (e.g. torn liner, evidence of leaks, signage, etc.). Repair all identified damage.
Vehicle and Equipment Fueling	Resupply on-site spill cleanup materials; clean up spills, properly dispose of contaminated soil and clean up materials;
Vehicle and Equipment Maintenance	Inspect vehicles and equipment for leaks; if possible, prohibit washing vehicles on-site; ensure equipment wash water discharges to the sanitary sewer.
Illicit Connection/Discharge Control	Prohibit staff and subcontractors from disposing of debris on site; notify owner/operator of illicit connections or discharge incidents immediately.
Potable Water/Irrigation	Repair broken lines and correct irrigation overspray as soon as possible.
Vehicle and Equipment/Cleaning	Ensure washing discharges to not leave the site.
Water Conservation Practice	Repair water equipment as needed to prevent non-storm water discharges.
Dewatering Operations	Ensure dewatering is not causing erosion, discharges do not contain pollutants, and activities are continuously monitored.
Final Stabilization	Not applicable.

3.2 BMP INSPECTIONS

Routine inspections are necessary to ensure the integrity and effectiveness of BMPs, and helps protect a site from unexpected weather events. Project owners or contractors should perform daily inspections to identify BMPs in need of maintenance. Self-inspections are to be performed by a QCP, as described in the following section. Upon identifying failures or other maintenance items, repairs or design changes to BMPs should be completed as quickly as feasible.

3.2.1 Qualified Contact Person

A QCP, as per the *Storm Water Standards* (City of San Diego 2012) definition, is to be assigned for the project. The QCP is to be specifically trained in storm water pollution prevention, including the installation and maintenance of sediment and erosion control measures. The QCP may designate additional, trained persons to assist with QCP responsibilities. The specific duties of the QCP and persons delegated by the QCP are:

- Coordinating with the appropriate City representatives to ensure the project complies with the WPCP and approved plans at all times;



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- Implementing all elements of the WPCP, including prompt and effective erosion, sediment, tracking, and wind erosion control measures and management of non-storm water discharges and construction materials and liquid, solid, and hazardous wastes;
- Assigning authority to mobilize crews in order to conduct immediate and complete BMP repairs and providing storm water pollution prevention training;
- Tracking weather conditions, as reported on the National Weather Service Forecast's website [<http://www.noaa.gov/wx.html>];
- Performing self-inspections;
- Informing the proper City representatives of non-compliance, such as unauthorized discharges, illicit connections or dumping activities, and immediately correcting the problems;
- Overseeing site stabilization;
- Ensuring that the WPCP is available onsite at all times during business hours; and
- Ensuring that WPCP records are retained for a minimum of three years

[Complete Table 23 with the name and contact information for the QCP and any additional persons designated by the QSP.]

Table 23
Qualified Contact Person and Designees

	Name	Company/ Organization	Phone Number
Qualified Contact Person			
Additional Persons Designated by the Qualified Contact Person			

3.2.2 Self-Inspections

The QCP or his/her designees is required to perform self-inspections, as per the *Storm Water Standards*. The objectives are to:

- Demonstrate the site is in compliance with the City's *Storm Water Standards* (2012) and San Diego Municipal Code Sect. 43.03;
- Ensure that storm water BMPs are properly documented, implemented, and effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges;
- Identify BMP maintenance (i.e., sediment removal) and repair needs;



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- Ensure that the site-specific WPCP is fully implemented and updated; and
- Ensure final stabilization of the site before demobilization.

The *Storm Water Standards* (City of San Diego 2012) requires performing self-inspections throughout the life of the project (until final stabilization is achieved). Self-inspections are not required during dangerous weather conditions such as flooding and electrical storms or outside of scheduled site business hours. Self-inspections are to be performed:

- At 24-hour intervals during extended rainfall events;
- During the rainy season, daily while grading operations are being conducted; and
- During the dry season, weekly.

During self-inspections, the QCP or designee should identify and record BMPs that are in need of maintenance to operate effectively, have failed, or could fail to operate as intended and if additional BMPs are needed. If additional BMPs are necessary, the WPCP should be revised accordingly. All self-inspections must be documented using a checklist. The self-inspection checklist shall also note the date, time, and weather conditions during the inspection. Completed checklists should be made available upon request. During self-inspections, storm water discharges must be monitored to determine the presence of pollutants. If any failures or deficiencies are identified, repairs or design changes should begin to be implemented within 72 hours and noted on the self-inspection checklist.

3.2.3 Recordkeeping and Reports

Records for the following items should be retained for a minimum of three years:

- Completed site inspection forms;
- Training documentation (if any);
- Discharge reports (if any); and
- WPCP and amendments (if any).



4.0 REFERENCES

California Department of Transportation (Caltrans)

2003 *Storm Water Quality Handbook SWPPP/WPCP Preparation Guide*. February 1.

California Stormwater Quality Association (CASQA)

2003 *Construction Stormwater BMP Handbook*. January.

City of San Diego

2012 *Storm Water Standards*. Available online at:

<http://www.sandiego.gov/thinkblue/pdf/stormwatermanual.pdf>. January 20.

San Diego Regional Water Quality Control Board (RWQCB)

2013 Order No. R9-2013-0001, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region*. Available online at: http://www.waterboards.ca.gov/rwqcb9/water_issues/programs/stormwater/docs/updates/052313/2013-0523_Order_No._R9-2013-0001_COMPLETE.pdf. May 8.

State Water Resources Control Board (SWRCB)

2009 *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Water Quality Order 2009-0009-DWQ*, General Permit No. CAS000002. Available online at: http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml



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**CITY OF SAN DIEGO
STANDARD WATER POLLUTION CONTROL PLAN TEMPLATE**

Appendix B

This WPCP must be certified by the applicant.

[Please sign and date below.]

The applicant must print and sign the following certification before a permit will be issued.			
<i>I have read and understand that the City of San Diego has adopted minimum requirements for managing urban runoff, including storm water from construction and land development activities. I certify that the BMPs selected on this form will be implemented to minimize the potentially negative impacts of this project's construction and land development activities on water quality. I further agree to install, monitor, maintain, or revise the selected BMPs to ensure their effectiveness. I also understand that non-compliance with the City's Storm Water Standards may result in enforcement by the City, including fines, cease and desist orders, or other actions. I further understand that approval of this WPCP does not relieve me of my responsibility to comply with storm water regulations including the protection of adjacent properties from inundation as a result of my construction activities.</i>			
Applicant Signature:		Date:	



**CITY OF SAN DIEGO
STANDARD WATER POLLUTION CONTROL PLAN TEMPLATE**

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**C CITY OF SAN DIEGO FORM DS-560, STORM WATER
REQUIREMENTS APPLICABILITY CHECKLIST**